

Application Serial No. 10/735,657
Response to Office Action mailed March 28, 2005

REMARKS/ARGUMENTS

In the office action mailed March 28, 2005, claims 1-26 and 31 were allowed, and claims 27-30 were rejected under 35 USC 102(b) as being anticipated by U.S. Patent No. 6,540,449 to Bejerstall. Claims 1-48 are currently pending.

Missing Claim 13/Amendments to claims 14-16/New claim 16

Upon reviewing the examined claims, the undersigned attorney for applicants noticed that claim 13 was missing from the original application. In the present amendment, Claims 14-16 have been renumbered 13-15 and their dependencies have been changed. A new claim 16 has also been added. If the above procedure to cure the omission of claim 13 is improper, the Examiner is kindly asked to suggest an alternative.

Support for the language in new claim 16 can be found in the original specification at paragraph 40 (lines 15-25).

Rejection of claims 27-30 under 35 USC 102(b)/Amendment to claim 27

In rejecting original claim 27 over U.S. patent no. 6,540,449 to Bejerstall, on page 2 of the office action, the Examiner argued as follows:

Regarding claim 27, '449 teaches a cutter body 500 (for example, see figure 20) with first and second sides (see figure 20 below); a centrally located female locating member formed in the cutter body first side with a throughbore extending along the cutter central axis and communicating with the female locating member (see figure 20 below, col. 6, lines 51-65, for example); a bolt 504 retained loosely in the throughbore (see figure 20); a plurality of circumferentially spaced-apart drive grooves (fig. 10 and 20, for example).

Even though the '449 patent uses the term "cutter body 500" to refer to the device seen in figure 20, this device is not a cutter body within the meaning of the present application. This device 500 is in reality a "cutting insert" of the sort held at the end of a holder for turning operations. In this regard, the Examiner's attention is directed to col. 6, lines 45-51, which reads:

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Reference is now made to FIGS. 19-21, which illustrate a tool according to the invention intended for turning. In this case, the cutting body 500 consists of a cutting insert for a turning lathe with a flat basic shape, which is placed in the immediate vicinity of the front end of the shaft 501, more precisely on one of the two opposite sides 536, 537 of the shaft. (emphasis added)

To emphasize the difference between the invention of claim 27 and Bejerstall, independent claim 27 has been amended to include "a plurality of locations for accommodating cutting inserts". Support for this language can be found in paragraph [0053] of the original specification.

With regard to pending claim 28, the Examiner argued that the '449 patent showed "a ring 515 (or see 415) configured to retain the bolt in the throughbore (figures 18 and 20 for example)". It is respectfully submitted that the Examiner is mistaken. Elements 415 (Fig. 18) and 515 (Fig. 20) are each said to be an "opening" or "cavity"¹. Nothing in the '449 patent either:

- (1) describes structures 415, 515 as a "ring" (as recited in claim 28), or
- (2) associates these structures with the function of retaining the bolt in the throughbore.

If the rejection is maintained, a detailed explanation of how the elements 415, 515 satisfy the term "ring" of pending claim 28, is requested.

With regard to pending claim 29, the Examiner argued that in the '449 patent, "the throughbore is such that when the cutter body 500 is turned upside down from the view of figure 20, it is easy to see that there is nothing restraining the movement of the bolt such that the bolt is only inserted into the cutter body to the extent that there is no thread extending from the throughbore."

Setting aside the fact that "cutter body 500" is actually just a cutting insert, the Examiner seems to have missed the point that claim 29 depends on claim 27, which calls for "a bolt loosely retained in the throughbore". In other words, in claim 29, the bolt must be loosely retained in the throughbore (language from claim 27) *and* when turned upside down, a threaded end of the bolt must not project from the throughbore into the female locating member. It is therefore submitted

¹ See '449 patent at col. 6, lines 25-61 for a discussion of cavities 415, 515.

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that the cutting insert 500 of the '449 patent cannot possibly meet these two conditions, and so claim 29 is independently patentable.

With regard to pending claim 30, the Examiner argued that the embodiment of Fig. 1 shows "tooth-like projections 12 that form a neck portion (central portion 14) on the side base of the cutter body that are spaced apart from a cutting head 13."² The rejection is traversed.

First, it is not completely clear what the Examiner is saying. The embodiment of Fig. 1 of the '449 patent shows a milling head 2 that is bayonet-mounted on a shaft 1. The milling head has tooth-like projections 12 provided with cutting edges 13. The milling head 2 does not require a through hole or a bolt to be secured to the shaft 1. As seen in the side view of Fig. 2 and in the partial cross-section of Fig. 5, the milling head 2 does have appear to have any sort of neck portion. What feature is the "base member" and what feature is the "neck"? Clarification is requested, if this rejection is to be maintained.

Also, is the Examiner suggesting that turning insert 500 be modified to have the tooth-like projections 12 of the milling head 2? If so, this would make no sense, since that would destroy the entire purpose of the turning insert 500. Accordingly, it is submitted that one skilled in the art would not be motivated to modify the cutting insert 500 to have the tooth-like projections 12 and cutting edges 13 seen in the cutting head 2 of Fig. 1. The Examiner cannot pick and choose random features present in various embodiments and combine them.

In view of the foregoing, it is submitted that claim 30 defines over the cited prior art, as well.

New dependent claims 32-34

Dependent claim 32 recites that each of the plurality of locations for accommodating cutting inserts is configured to also accommodate an adjustment seat. The adjustments seats are described in paragraph [0053] of the original application and can be seen in Fig. 4. The cutting insert 500 in Fig. 20 of the '449 patent clearly does not disclose this, nor does there seem to be any possible motive to modify cutting insert 500 of the '449 patent to do so. Accordingly, claim 32 is believed to define over the '449 patent for reasons independent of its dependency on claim

² In the '449 patent, reference numeral 13 points to a "cutting edge (see col. 3, lines 59-61).

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27.

Dependent claim 33 recites that the retaining portion is associated with opposing outer and inner groove sidewalls which at least partially overhang the bottom surface. This feature is completely absent from the cutting insert 500 in Fig. 20 of the '449 patent.

Dependent claim 33 recites that the ring is seated in a recess and that it has a diameter smaller than that of a head of the bolt. These features are also completely absent from the cutting insert 500 in Fig. 20 of the '449 patent.

New independent claim 35

Pending claim 35 recites, inter alia:

“a bolt loosely retained in the throughbore; and
a ring positioned proximate to the second side of the cutter body, wherein
the ring prevents the bolt from being removed from the throughbore.”

It is submitted that none of the cited references discloses this feature. The '449 patent does not disclose a bolt that is loosely retained in the throughbore of a cutter body. In addition, the '449 patent doesn't disclose a ring positioned proximate to the second side of the cutter body, let alone one that prevents the bolt from being removed from the throughbore.

Dependent claims 36-40 further define the invention of claim 35.

New independent claim 41

Pending claim 41 recites, inter alia,:

“a plurality of circumferentially spaced-apart drive grooves formed in the cutter body first side, each drive groove having an insertion portion connected to a retaining portion and a bottom surface, the retaining portion being associated with opposing outer and inner groove sidewalls which at least partially overhang the bottom surface”

It is submitted that none of the cited references discloses this feature. The '449 patent does not disclose a drive groove having an insertion portion connected to a retaining portion, the retaining portion being associated with opposing outer and inner groove sidewalls which at least partially overhang the bottom surface.

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Dependent claims 41-47 further define the invention of claim 41 and are supported by the original application.

New independent claim 48

Pending claim 48, which is directed to a "cutting tool component", recites, inter alia, "a milling cutter body having first and second sides and a cutter central axis" and "a centrally located female locating member formed in the first side, the female locating member tapering from a widest portion at the first side to a narrowest portion within the milling cutter body at a point between the first and second sides." This latter feature can be seen in, e.g., Figs. 6a & 6b of the present application.

It is submitted that these features clearly are not present in the cutting insert 500 seen in Fig. 20 of the '449 patent. First, the cutting insert 500 of the '449 patent cannot be said to a "milling cutter body"; it is cutting insert used for turning operations. Second, to the extent that the hollow portion of the cutting insert 500 can be considered a "female locating member", it certainly does not taper from a widest portion at the first side to a narrowest portion within the milling cutter body at a point between the first and second sides. As seen in Fig. 20 of the '449 patent, the cutting insert's 500 hollow portion appears to be *widest* at point mid-way between the first and second sides and *narrowest* at the first and second sides. In other words, with respect to the "tapering language", the cutting insert 500 of the '49 patent teaches the opposite of pending claim 48. Accordingly, it is submitted that claim 48 clearly defines over the teachings of this reference.

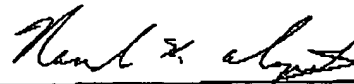
Reconsideration of the application is requested. Claims 1-48 are believed to be in allowable form and define over the prior art of record. An early notice of allowance is requested so that the application may proceed to issue. Should the Examiner not agree with the foregoing, the Examiner is kindly asked to contact the undersigned to help expedite matters.

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A separate Fee Transmittal Sheet is enclosed.

Respectfully Submitted,

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Enclosure